

We claim:

comprising:

1. A method for determining a company's probability of no default
  - determining a factor reflecting price volatility of shares in the company;
  - determining a factor reflecting price of the shares in the company;
  - determining a factor reflecting debt per share of the shares in the company;
  - determining a factor reflecting expected debt recovery fraction;
  - determining a factor reflecting deviation of the expected debt recovery fraction; and
  - determining the company's probability of no default using at least the factor reflecting price volatility of shares in the company, the factor reflecting price of the shares in the company, the factor reflecting debt per share of the shares in the company, the factor reflecting expected debt recovery fraction and the factor reflecting deviation of the expected debt recovery fraction.
2. A method according to claim 1, further comprising calculating a second company's probability of no default according to the method of claim 1 and making an investment decision after calculating both probabilities of no default.
3. A method according to claim 1, wherein the shares in the company include equity securities.
4. A method according to claim 1, wherein the shares in the company include debt securities.

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14. A method according to claim 1, wherein the method is performed before a new financial instrument offering.

15. A method according to claim 1, wherein the method is performed in conjunction with an existing financial instrument offering.

16. A method according to claim 1, wherein the probability of no default is used as a factor in rating the company.

17. A method according to claim 1, wherein the probability of no default is used as a factor in rating a particular financial instrument.

18. A method according to claim 1, wherein the probability of no default is used as a factor in rating a class of financial instruments.

19. A method according to claim 1, further comprising determining a factor reflecting current price of the shares in the company and determining the company's probability of no default also uses the factor reflecting current price of the shares in the company.

20. A method according to claim 19, wherein the company's probability of no default between time  $t = 0$  and  $t = T$  is  $B(T)$  and determining  $B(T)$  uses at least equations substantially in the forms:

$$d = \frac{(S_0 + \bar{L}D)\exp(\lambda^2)}{\bar{L}D};$$

$$A_T^2 = (\sigma_s^* S^* / (S^* + \bar{L}D))^2 T + \lambda^2; \text{ and}$$

$$B(T) = N\left[\frac{\ln(d)}{A_T} - 0.5A_T\right] - d * N\left[-\frac{\ln(d)}{A_T} - 0.5A_T\right],$$

where  $S_0$  is the factor reflecting current price of the shares in the company,  $S^*$  is a given share price and is the factor reflecting price of the shares in the company,  $\sigma_s^*$  is a standard deviation of share prices and is the factor reflecting price volatility of shares in the company,  $D$  is the factor reflecting debt per share of the shares in the company;  $\bar{L}$  is the factor reflecting expected debt recovery fraction,  $\lambda$  is a percentage standard deviation of the expected debt recovery fraction and is the factor reflecting deviation of the expected debt recovery fraction, and  $N$  is a cumulative normal distribution function.

21. A method according to claim 20, further comprising:

determining a default spread  $s(t)$  for a time  $t = T$  using at least an equation substantially in the form:

$$s(T) = -\left(\frac{1}{T}\right) \ln(B(T)).$$

22. A method according to claim 20, further comprising:

determining a normalized probability of no default  $Z(t)$  for a time  $t = T$  using at least an equation substantially in the form:

$$Z(T) = \frac{B(T)}{B(0)}.$$

23. A method for determining a company's probability of no default over a time period between  $t = 0$  and  $t = T$  comprising:

determining a standard deviation  $\sigma_s^*$  of past share prices in the company;  
determining a current share price  $S_0$  of the shares in the company  
determining a given share price  $S^*$  of the shares in the company;  
determining a debt per share  $D$  of the shares in the company;  
determining a expected debt recovery fraction  $\bar{L}$ ;  
determining a percentage deviation  $\lambda$  in the expected debt recovery

fraction  $\bar{L}$ ; and

determining  $B(T)$  as the company's probability of no default between  $t = 0$  and  $t = T$  using at least  $\sigma_s^*$ ,  $S_0$ ,  $S^*$ ,  $D$ ,  $L$  and  $\lambda$  with equations substantially in the forms:

$$d = \frac{(S_0 + \bar{L}D)\exp(\lambda^2)}{\bar{L}D};$$

$$A_T^2 = (\sigma_s^* S^* / (S^* + \bar{L}D))^2 T + \lambda^2; \text{ and}$$

$$B(T) = N\left[\frac{\ln(d)}{A_T} - 0.5A_T\right] - d * N\left[-\frac{\ln(d)}{A_T} - 0.5A_T\right].$$

24. Computer executable software code stored on a computer-readable medium, the code for determining a company's probability of no default, the code comprising:

code to determine a factor reflecting price volatility of shares of the company;  
code to determine a factor reflecting price of the shares of the company;  
code to determine a factor reflecting debt per share of the shares of the company;

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code to determine a factor reflecting expected debt recovery fraction;  
code to determine a factor reflecting deviation of the expected debt  
recovery fraction; and

code to determine the company's probability of no default using at least  
the factor reflecting price volatility of shares of the company, the factor reflecting price  
of the shares of the company, the factor reflecting debt per share of the shares of the  
company, the factor reflecting expected debt recovery fraction and the factor reflecting  
deviation of the expected debt recovery fraction.

25. A computer-readable medium having computer executable  
software code stored thereon, the code for determining a company's probability of no  
default, the code comprising:

code to determine a factor reflecting price volatility of shares of the  
company;

code to determine a factor reflecting price of the shares of the company;  
code to determine a factor reflecting debt per share of the shares of the  
company;

code to determine a factor reflecting expected debt recovery fraction;  
code to determine a factor reflecting deviation of the expected debt  
recovery fraction; and

code to determine the company's probability of no default using at least  
the factor reflecting price volatility of shares of the company, the factor reflecting price  
of the shares of the company, the factor reflecting debt per share of the shares of the

company , the factor reflecting expected debt recovery fraction and the factor reflecting deviation of the expected debt recovery fraction.

26. A programmed computer for determining a company's probability of no default, comprising:

a memory having at least one region for storing computer executable program code; and

a processor for executing the program code stored in the memory; wherein the program code includes:

code to determine a factor reflecting price volatility of shares of the company;

code to determine a factor reflecting price of the shares of the company;

code to determine a factor reflecting debt per share of the shares of the company;

code to determine a factor reflecting expected debt recovery fraction;

code to determine a factor reflecting deviation of the expected debt recovery fraction; and

code to determine the company's probability of no default using at least the factor reflecting price volatility of shares of the company, the factor reflecting price of the shares of the company, the factor reflecting debt per share of the shares of the company, the factor reflecting expected debt recovery fraction and the factor reflecting deviation of the expected debt recovery fraction.

27. A financial instrument including a risk rating based in part on a probability of no default by a company, the company's probability of no default determined by a method comprising:

determining a factor reflecting price volatility of shares in the company;  
determining a factor reflecting price of the shares in the company;  
determining a factor reflecting debt per share of the shares in the company;  
determining a factor reflecting expected debt recovery fraction;  
determining a factor reflecting deviation of the expected debt recovery fraction; and  
determining the company's probability of no default using at least the factor reflecting price volatility of shares in the company, the factor reflecting price of the shares in the company, the factor reflecting debt per share of the shares in the company, the factor reflecting expected debt recovery fraction and the factor reflecting deviation of the expected debt recovery fraction.